FASTEC IMAGING™

FASTEC TS5

TS5 At A Glance

- Handheld, battery-powered, with built-in touchscreen LCD
- TS5-Q models record Quad HD (2560 x 1440) @ 359fps
- TS5-H models record full 1080p @ 634fps
- Advanced 5-Megapixel CMOS sensor
- Multiple recording modes to suit any situation
- Control via powerful Fas*Motion* Software on PC or Mac or via built-in web interface
- Long Record Option: Stream video directly to an SSD

Key Features

- **Performance to fit** – With four models from SVGA (800x600) to QSXGA (2560x2048), there is a *TS5* that is right for your needs. All models use an advanced 5-Megapixel sensor that produces remarkably clean images at all resolutions. Binning and sub-sampling features of the sensor give it great flexibility and sensitivity.

- **Fas*Fire* Mode** – Ultra-fast save times to the onboard media *while simultaneously recording* high-speed bursts of hundreds or even thousands of images at a time, the *TS5* is always ready for the next high-speed snapshot!

- **Portability** – With its small form factor, battery operation, large built-in LCD touch screen and intuitive on-screen menu system, the *TS5* puts the power of both a traditional high-speed camera *and* long-record system into the palm of your hand. The *TS5* is truly a point-and-shoot high-speed camera solution.

- **Flexible Control** – The *TS5* can be operated as a self-contained, handheld camera, or controlled over Gigabit Ethernet via Fastec Fas*Mo*tion software on your PC or Mac or via the built-in web interface with your favorite web browser on your PC, Mac, tablet, or even your smartphone.

- **High-Performance Image Transfer** – The Fas*Mo*tion application makes workflow a breeze with transfers of uncompressed images via Gigabit Ethernet at rates of 50–80MB/sec to moderately equipped PCs.

- **Multiple Storage Options** – The *TS5* features both a USB port and an SD port for quick and easy image downloads to USB flash drives, SD cards, or portable hard drives. The built-in SSD provides up to 1 terabyte (TB) of lightning-fast non-volatile internal storage.

- **Long Record Option** – Stream video to a built-in SSD at over 200 frames per second at HD 1080p resolution and 520 fps at HD 720p resolution. Unlike traditional high-speed camera systems that record for a only few seconds and require careful triggering, the Fastec *TS5* with LR option can record at high speed for many minutes, or hours at reduced resolutions.

- **Fas*Corder* Mode** – The *TS5* allows you to acquire multiple high-speed "takes" of varied lengths, from a few seconds to many minutes, without having to fuss with any settings. Just click to record, click again to pause...as often and as quickly as the situation demands.

*F*astec TS5 Specifications

Standard Features

System Design	Handheld, battery-powered, portable with touchscreen LCD
Sensor	12-bit CMOS sensor with 5µm square pixels, color or monochrome
Sensor Modes	Standard, binning 2x2, 4x4; sub-sampling 2x2, 4x4; 2x bin + 2x sub
Resolution by Model	TS5-Q: QSXGA 2560 x 2048; TS5-H: HD 1920x1080; -S: SXGA 1280x1024; -L SVGA 800x600
Light Sensitivity	1600 to 12,800* ISO monochrome, 800 to 6400* ISO color (depending on mode)
Shutter	Global electronic shutter from 3µsec to 41.654ms
Image Memory	4GB (std.) or 8GB (optional)
Removable Storage	SD card (SDHC: 32GB maximum); USB flash drive
File Formats	Stacks – BMP, DNG, JPEG, TIFF, TIFF(raw); Video – AVI, CAP(raw); Still – JPEG
Lens Mounts	C-mount (std.), F-mount or PL-mount (optional)
Built-in Monitor	High resolution, 178mm (7") diagonal LCD
Communication Ports	USB 2.0 device (micro-B), Ethernet (10/100/1000Base-T)
Control Software	Fas*M*otion (PC/Mac application), web interface (browser on all platforms)
Six External I/O Ports	Markers, Trigger In/Out, Sync In/Out, Arm In/Out (LVTTL (3.3V) or switch closure)
Marker Data Views	Camera display info line, playback timeline, Fas*M*otion o-scope mode, XML file
Video Out	HDMI (1080p30, 1080p60, 720p, 480p)
Construction	Anodized machined aluminum housing
Power	Rechargeable Internal Li-ion battery or 10-26 VDC external
Power Consumption	42W maximum
Operating Environment	+5°C to +40°C
Size and Weight	228mm (9.0") W x 114mm (4.5") H x 89mm (3.5") D. 1.8 Kg (3.9 lbs.)

Optional Features

WiFi	802.11 b/g/n, Security: open, WEP, WPA(2) - PSK
Built-In Storage	Solid State Drive (SSD): 250GB, 500GB, 1TB
Dual Mode (Long Record)	Streams uncompressed video to SSD at 480MB/sec; 8GB mem. + SSD required; available on all TS5 models; ships with an external battery pack

*Higher ISO settings available via bit-shifting and analog gains result in lower SNR. Binning modes reduce noise.

Sample Record Rates and Times

Resolution	Normal Mode*		Long Record Mode**	
	Max Frame Rate	Recording Time	Max Frame Rate	Recording Time
2560 x 2048 (QSXGA)	253fps	6.5 sec	91fps	17.3 min
2560 x 1440 (QHD)	359fps	6.4 sec	130fps	17.3 min
1920 x 1080 (HD: 1080p)	634fps	6.5 sec	231fps	17.3 min
1440 x 1080	634fps	6.4 sec	308fps	17.3 min
1280 x 1024 (SXGA)	668fps	7.2 sec	366fps	17.3 min
1280 x 960	721fps	7.2 sec	390fps	17.3 min
1280 x 720 (HD: 720p)	943fps	7.2 sec	520fps	17.3 min
1024 x 1024	668fps	9.1 sec	457fps	17.3 min
1024 x 768 (XGA)	885fps	9.1 sec	610fps	17.3 min
800 x 600 (SVGA)	1125fps	11.8 sec	993fps	17.3 min
800 x 450	1477fps	11.9 sec	1331fps	17.3 min
640 x 576	1172fps	14.7 sec	1172fps	19.1 min
640x480 (VGA)	1398fps	14.8 sec	1398fps	19.2 min
512 x 384	1732fps	18.7 sec	1732fps	24.0 min
320 x 240	2697fps	41.1 sec	2268fps	24.0 min

(Row groupings: TS5-Q QSXGA, TS5-H HD: 1080p, TS5-S SXGA, TS5-L SVGA)

All Specifications subject to change. All record times and rates assume 8-bit data.
*Record times assume 8GB of memory. Divide Record times by 2 for approximate 4GB record times.
**LR Record times assume streaming option and 500GB SSD. Multiply by 2 if using a 1TB SSD.